Nap: 20 ppb
124 TMB: 5 ppb
135 TMB: 4 ppb

JAN 5 9 53 AM '99

DSM ENVIRONMENTAL SERVICES, INC.

Engineers, Economists, Environmental Scientists, Planners

January 4, 1999

Ms. Lynda Provencher
State of Vermont
Agency of Natural Resources
Waste Management Division
103 South Main Street / West Office
Waterbury, Vermont 05671 - 0404

98-2406

Re: Status Report
Lemire / 18 Central Street
Windsor, Vermont
DSM Project Number 380

Dear Lynda:

DSM Environmental Services has been conducting an investigation into the presence of petroleum products in soil and groundwater at property owned by Mr. Dennis Lemire, 18 Central Street, Windsor, Vermont.

This investigation began this past summer when Mr. Lemire entered into an agreement to sell his property. During the appraisal of the property, it was found that the property was formerly used as a fuel oil storage and distribution facility. Mr. Lemire commissioned DSM to complete some soil investigations in an attempt to determine if former site operations had impacted soil, groundwater or other receptors. During this initial phase of investigation, DSM worked with Farrell-Seward, Inc. to excavate three test pit excavations. During completion of one of these test pits, a strong odor was noted, and scans with a photoionization detector indicated the presence of volatile organic compounds.

We collected a composite sample of soil from a test pit that was located adjacent to the location of monitoring well number 3, and submitted this sample for analysis. Eastern Analytical, Inc., completed analysis of this sample for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) by methods 8100 (modified) and 8021 respectively. The results indicated that VOCs were all below detection limits of the method. TPH was found at 750 mg/kg (equivalent to parts per million). For reference, we have attached a copy of our initial notification report to the Vermont Agency of Natural Resources (VANR) dated September 4, 1998.

Based on these results, DSM and M&W Soils Engineering completed the installation of three groundwater monitoring wells on October 8, 1998. After completion of these wells, we determined that a minor amount of free product was present on the surface of the groundwater of

Thrasher Rd & Route 5, PO Box 466, Ascutney, VT 05030
TEL: (802) 674-2840 • FAX: (802) 674-6915 • E-mail: 76753.1734 @ compuserve.com

both monitoring well 2 and 3. For reference, please see the attached site sketch. DSM and M&W completed the installation of three additional wells on November 17, 1998 on property owned by the Town of Windsor, Vermont. These wells were installed to define the potential impact to soil, groundwater and downgradient receptors by petroleum products, off site from the Lemire property. After these wells were completed, DSM collected samples from each of the wells on December 10, 1998. Samples were collected from all of the wells except for MW 2. A sample was not collected from MW2 due to the presence of free product at this location. Free product measured approximately 1/8" thick in this well.

Analysis was completed by Eastern Analytical, Inc. of groundwater samples collected at the site for VOCs and TPH by methods 8260B and 8100 (modified) respectively. We have prepared a summary table outlining the results of the analysis and attached the table to this letter. Of note is the presence of Naphthalene at 12 micrograms per liter (μg/l) which exceeds the Vermont Preventive Action Level; and 1,2,4 Trimethylbenzene and 1,3,5 Trimethylbenzene at 28 and 7 μg/l respectively. Both of these values exceed the Vermont Enforcement Standard.

During the course of this investigation, DSM completed a review of files at the Vermont Agency of Natural Resources. Several other release sites have been reported in Windsor, and we wanted to attempt to determine if any of these sites may have, or had, an impact on the Lemire property. In particular, we were concerned about the reported release of products on the adjoining Town Highway garage property to the south of 18 Central Street. Our review of state files indicates that a release of gasoline occurred at this site. However, information in the files suggest that little investigation has been done on that site. We should note that our references suggest that 1,2,4 and 1,3,5 trimethylbenzene, iso-propylbenzene, and sec-butylbenzene are constituents of high octane gasoline. The presence of these compounds in MW3, and the reported release of gasoline at the Windsor Highway Garage property raises the question of the possible migration of gasoline compounds from the Highway Garage to the 18 Central Street property.

9/1/75

Based on the information we have developed to date, it does not appear that petroleum products have migrated to the line of monitoring wells on the eastern side of Central Street, property owned by the Town of Windsor.

At this time, several options are available to address the presence of petroleum in the subsurface environment. Prior to offering specific alternatives, we would like for you to review the enclosed information. Once you have had a chance to review the enclosed, we would like to discuss options with you concerning future operations at this site.

Should you have any questions or comments concerning the enclosed, please feel free to contact DSM Environmental Services, Inc.

Very truly yours;
DSM Environmental Services, Inc.

Theodore S. Reeves, P.E.
Senior Project Manager

tsr
enclosures
cc: Mr. Dennis Lemire

-Where were ASTs located?
-No PID readings in mw logs?
-Only fuel oil odor during drilling of MW2 @20'?

Lemire / 18 Central Street
Windsor, Vermont
Attachment 1
Letter from DSM to Vermont ANR date September 4, 1998

DSM ENVIRONMENTAL SERVICES, INC.

Engineers, Economists, Environmental Scientists, Planners

September 4, 1998

Mr. Chuck Schwer
State of Vermont
Agency of Natural Resources
Waste Management Division
Sites Management Section
103 South Main Street / West Building
Waterbury, Vermont 05671-0404

Re: 18 Central Street
Windsor, Vermont
DSM Project Number 380

Dear Chuck:

We are writing on behalf of our client, Mr. Dennis Lemire, concerning discovery of an apparent release of petroleum products. The apparent release has occurred at Mr. Lemire's property at 18 Central Street, in Windsor, Vermont.

The property in question is the site of a former fuel oil distributor known as MacLeay Oil Company. According to reports, MacLeay Oil Company went out of business in approximately 1974. It has been reported to DSM that there were aboveground tanks located on the property for approximately 40 years. The tanks have since been removed from the property. No underground storage tanks were reported or observed.

Mr. Lemire is in the process of selling this property. As part of the sale, the lender had requested that a limited assessment of the property was completed. As part of this assessment, three test pit excavations were completed, each to a depth of approximately eight feet below the ground surface. During two of the excavations, the presence of petroleum products was noted based on the presence of odors and readings of a photoionization detector. Groundwater was not encountered in any of the test pit excavations. For your reference, we have attached a site sketch and locus map.

During the assessment, DSM personnel collected one composite sample from one of the test pit excavations (TP3), and forwarded this sample to Eastern Analytical, Inc. (EAI). EAI completed analysis of the sample for aromatic hydrocarbons (BTEX) and total petroleum hydrocarbons (TPH) by methods 8021 and 8100 respectively. The analysis results reported by EAI indicate that no detected concentrations of BTEX were present in the sample, however, TPH (C9 - C40) was reported at 750 mg/kg. The results of the EAI work are also attached.

Thrasher Rd & Route 5, PO Box 466, Ascutney, VT 05030
TEL: (802) 674-2840 • FAX: (802) 674-6915 • E-mail: 76753.1734 @ compuserve.com

Please take a moment to review the enclosed material. Once you have had a chance to review the enclosed, we would like to know your thoughts concerning the future status of this potential release. If additional work is necessary, Mr. Lemire would like to access the Petroleum Cleanup Fund to cover the costs of additional assessment and possible remedial work at this site. Please feel free to contact Mr. Lemire (802-484-5577) or me at the address below (email TReevesnh@aol.com). As Mr. Lemire is anticipating the sale of this property, he would like to continue working to resolve this issue as soon as possible.

In advance, thank you for your consideration.

Very truly yours;

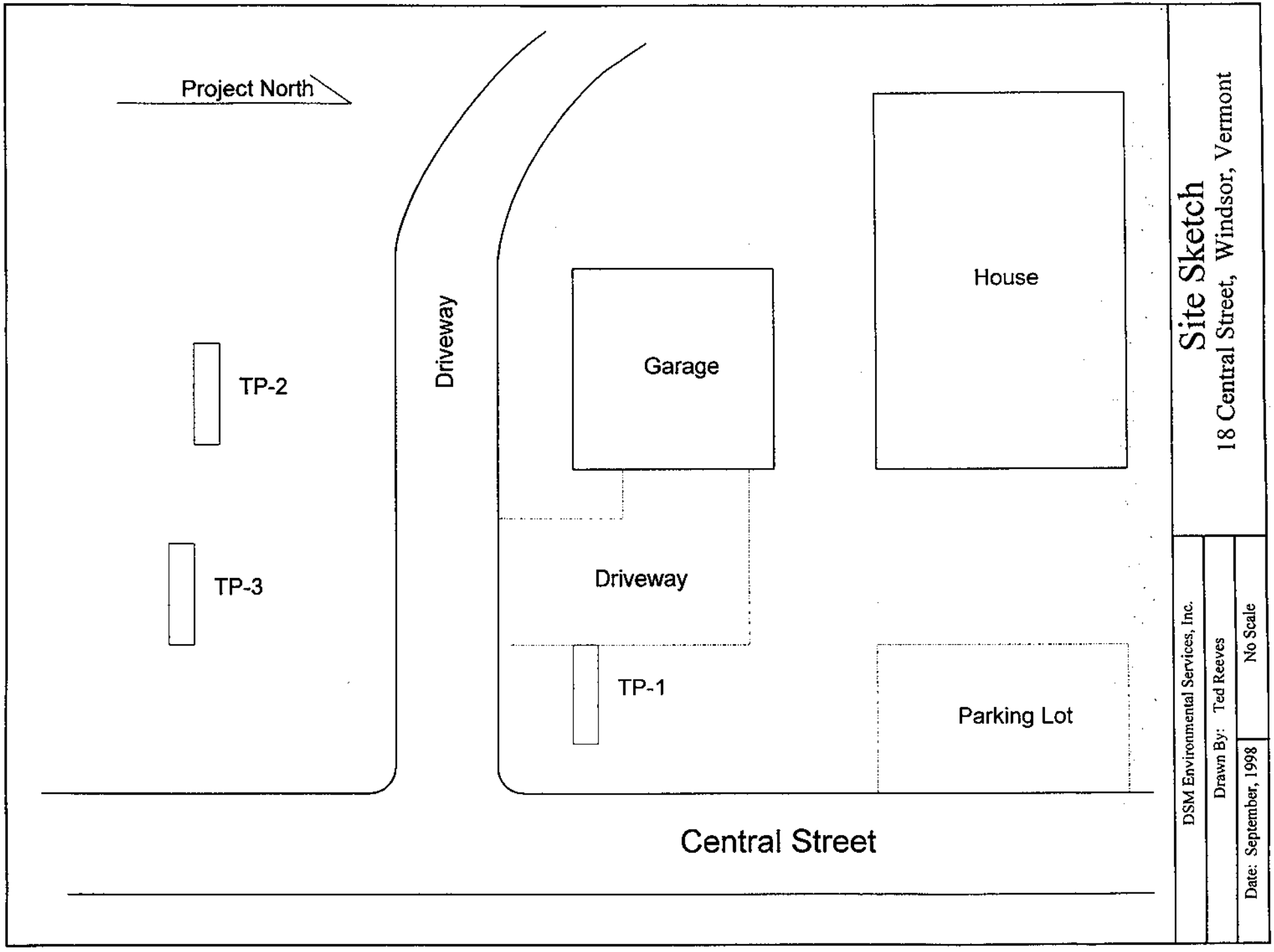
DSM Environmental Services, Inc.

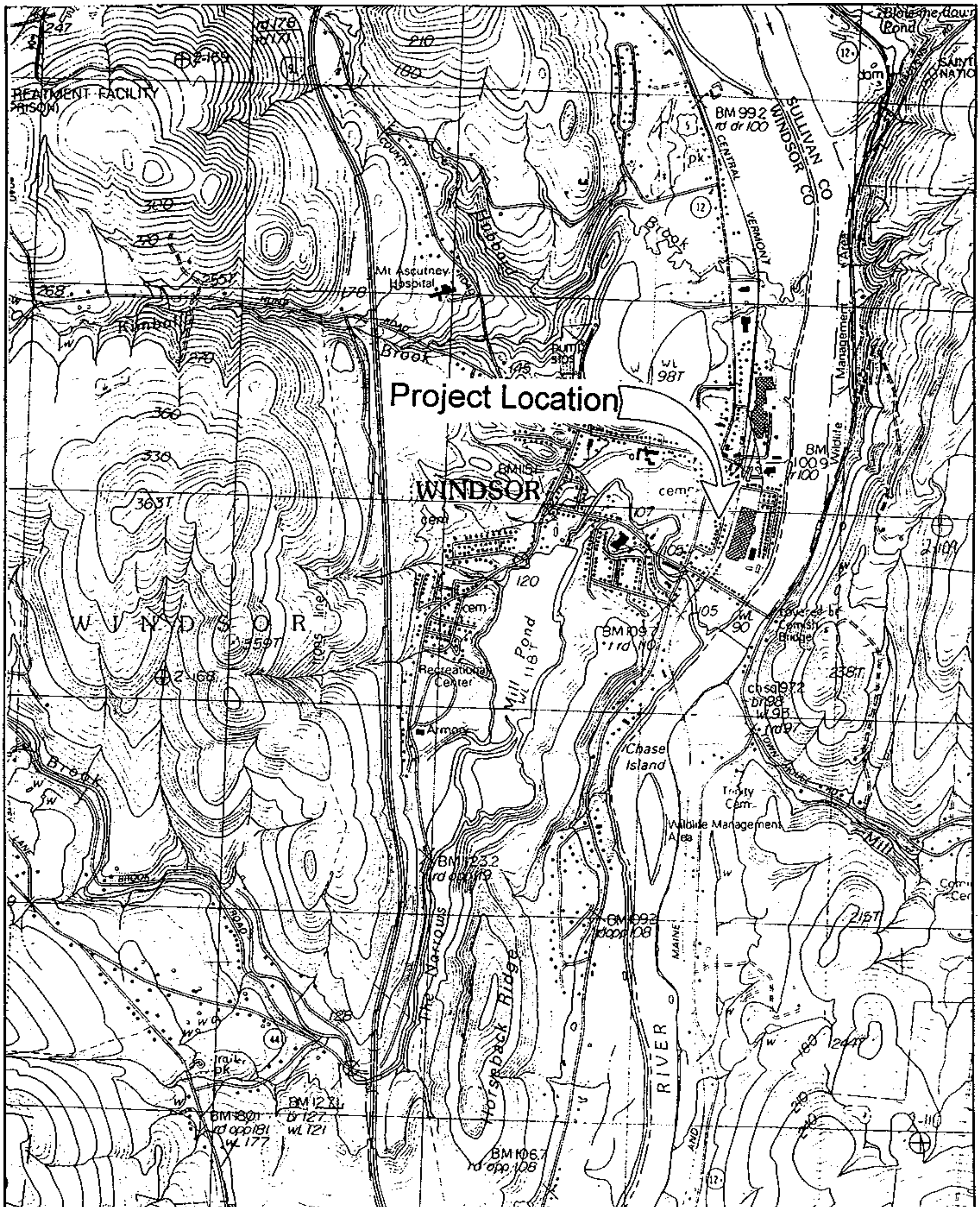
Theodore S. Reeves, P.E.
Senior Project Manager

tsr

c: Mr. Dennis Lemire

enclosures


Project North
Driveway
House
Garage
TP-2
TP-3
Driveway
TP-1
Parking Lot
Central Street
Site Sketch
18 Central Street, Windsor, Vermont
DSM Environmental Services, Inc.
Drawn By: Ted Reeves
Date: September, 1998
No Scale



DSM Environmental Services, Inc.		**Locus Plan**
Drawn By: Ted Reeves		18 Central Street, Windsor, Vermont
Date: September, 1998	Scale: As Shown	

eastern analytical

professional laboratory services

Ted Reeves
DSM Environmental Services
Thrasher Road, Rt.5
Ascutney , Vt 05030

Subject: Laboratory Report

Eastern Analytical, Inc. ID:	13694 DSM
Client Identification:	18 Central St.
Date Received:	8/20/98

Dear Mr. Reeves :

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy. Unless otherwise stated, all holding times, preservation techniques, container types and sample condition adhered to EPA protocol.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None Detected, no established detection limit
- BRL = Below Reporting Limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Will Brunkhorst

Will Brunkhorst, President

8/24/98
Date

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 13694

Client: DSM Environmental Services

Client Designation: 18 Central St.

Volatile Organic Compounds

Client ID:	TP-3
Matrix:	soil
Date Received:	8/20/98
DateAnalyzed:	8/20/98
Analyst:	VG
Units:	ug/Kg
Method:	8021

MTBE	< 500
Benzene	< 50
Toluene	< 50
Ethylbenzene	< 50
m,p-Xylene	< 50
o-Xylene	< 50

Approved By Clifford Chase, Volatile Organics Supervisor 9/24/98

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 13694

Client: **DSM Environmental Services** Client Designation: **18 Central St.**

Sample ID:	TP-3
Analytical Type:	Sample
Matrix:	soil
Date Sampled:	8/19/98
Date Received:	8/20/98
Units:	mg/kg
Date of Extraction/Prep:	8/20/98
Date of Analysis:	8/20/98
Analyst:	DJS
Method:	8100 Mod
Dilution Factor:	1
TPH (C9-C40)	750

Approved By: Timothy Schaper Organics Supervisor Timothy A. Schaper 8/24/98

eastern analytical

CHAIN OF CUSTODY FORM 13694

Eastern Analytical
25 Chenell Dr.
Concord, NH 03301

Phone: 800 287-0525
Fax: (603) 228-4591
e-mail:Front_Office@eailabs.com

Name: Ted Reeves

Company: DSM Env. Services

Address: PO Box 466
Ascutney, VT 05030

Phone: 802 674 2840

Fax: 802 674 6915

Project ID: 18 Central St.
(To appear on report)

Results needed by (enter preferred date): Std.
(Guaranteed rapid turnaround must have pre-approval)

TEST PARAMETERS
Drinking Water? Y (N) (Circle One)

Sample ID's (To appear on report)	No of Cont.	Sampling Date/Time		Matrix	Pres.	8021 B BTEX only	8100			Other Parameters/Notes
TP-3	2	8/19/98	8:10A	soil	Y	✓	✓			

Sampled by: T.S. Reeves

State in ~~which~~ sample collected Vermont

Relinquished by:	Date:	Time:	Received by:
[signature]	8/19/98	11:40	Fedex / [signature] 8/20/98

Additional Notes i.e. Special Detection Limits, Billing info if different, PO#, Quote# etc.

Fast TAT ... see Rush Worksheet

Lemire / 18 Central Street
Windsor, Vermont
Attachment 2
Soil Boring / Monitoring Well Logs

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 10/8/98
HOLE NO. MW-1
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO GEORGE MURRAY PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 17'5" AT 2 HOURS
AT AT HOURS

	CASING	SAMPLER	CORE BAR
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 10/8/98
DATE COMPL. 10/8/98
BORING FORMAN M.D. & M.H.
INSPECTOR G. MURRAY
SOILS ENGR.

LOCATION OF BORING UPGRADIENT WELL, AS STAKED

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE NO.	PEN	REC
						4"	TOPSOIL			
					MED. DENSE	3'	BROWN GRAVELLY SAND			
5'	5' - 7'	SS	10	4				1	24"	16"
			4	8						
					MED. DENSE		BROWN FINE SAND WITH SOME SILT			
10'	10' - 12'	SS	4	5				2	24"	18"
			4	4						
						13'				
15'	15' - 17'	SS	3	3				3	24"	19"
			2	3	LOOSE - WET		BROWN FINE SAND			
						19'				
20'	20' - 22'	SS	10	24				4	24"	20"
			26	18	DENSE		BROWN FINE TO COARSE SANDY GRAVEL			
						22'				
							NO BEDROCK TO DEPTH			
25'							SET 2" WELL AT 20' TOP OF WELL AT 10' SAND TO 8'2" BENTONITE TO 7'			
							MATERIALS USED: 10' OF 2" PVC 0.010" SLOT SCREEN 10' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 200# OF SAND 40# OF CEMENT MIX 1 2" EXPANSION CAP 1 2" PVC CAP 1 6" CAST IRON MANHOLE			

GROUND SURFACE TO 22' USED HSA CASING THEN DROVE SS 24"

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 22'
ROCK CORING
SAMPLES 4
HOLE NO. MW-1

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 10/8/98
HOLE NO. MW-2
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO GEORGE MURRAY PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 18'6" AT 1/2 HOURS
AT AT HOURS

	CASING	SAMPLER	CORE BAR
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 10/8/98
DATE COMPL. 10/8/98
BORING FORMAN M.D. & M.H.
INSPECTOR G. MURRAY
SOILS ENGR.

LOCATION OF BORING AS STAKED, 20' WEST OF POLE #8

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE NO.	PEN	REC
					MED. DENSE		BROWN SANDY FINE GRAVELS			
						3'2"				
5'	5' - 7'	SS	5	3				1	24"	20"
			5	4						
					MED. DENSE		BROWN FINE SAND WITH SOME SILT			
10'	10' - 12'	SS	3	3				2	24"	19"
			3	3						
						13'				
15'	15' - 17'	SS	18	22				3	24"	18"
			26	15						
					MED. DENSE TO DENSE - WET		BROWN FINE TO COARSE GRAVELS			
20'	20' - 22'	SS	8	14			(FUEL OIL ODOR IN SAMPLE #4)	4	24"	4"
			4	12						
	22' - 24'	SS	8	8		22'		5	24"	20"
			6	7	MED. DENSE		GREY SILT AND FINE SAND			
						24'				
25'							NO BEDROCK TO DEPTH			
							SET 2" WELL AT 23'			
							TOP OF WELL AT 13'			
							SAND TO 11'			
							BENTONITE TO 10'			
							MATERIALS USED:			
							10' OF 2" PVC 0.010" SLOT SCREEN			
							15' OF 2" PVC SOLID			
							25# OF BENTONITE CHIPS			
							200# OF SAND			
							40# OF CEMENT MIX			
							1 2" EXPANSION CAP			
							1 2" PVC CAP			
							1 6" CAST IRON MANHOLE			

GROUND SURFACE TO 24' USED HSA CASING THEN DROVE SS 24"

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 24'
ROCK CORING
SAMPLES 5
HOLE NO. MW-2

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 10/8/98
HOLE NO. MW-3
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO GEORGE MURRAY PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 18'3" AT IMMEDIATELY HOURS
AT _____ AT _____ HOURS

	CASING	SAMPLER	CORE BAR.
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 10/8/98
DATE COMPL. 10/8/98
BORING FORMAN M.D. & M.H.
INSPECTOR G. MURRAY
SOILS ENGR.

LOCATION OF BORING 20' WEST OF ROAD, NEAR WHITE BIRCH TREE

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE NO.	PEN	REC
					LOOSE	5'	TOPSOIL			
5'	5' - 7'	SS	5	3				1	24"	20"
			4	3	LOOSE		BROWN FINE SAND - TRACE TO SOME SILT			
10'	10' - 12'	SS	3	4				2	24"	22"
			3	3		11'8"				
15'	15' - 17'	SS	4	10	LOOSE		BROWN FINE SAND - TRACE OF SILT	3	24"	16"
			12	12						
	17' - 19'	SS	21	10		17'		4	24"	18"
			9	7	MED. DENSE		BROWN OXIDIZED MEDIUM TO COARSE SAND			
20'	20' - 22'	SS	16	15				5	24"	20"
			10	8		21'				
					MED. DENSE	23'	GREY FINE SAND AND SILT			
25'							NO BEDROCK TO DEPTH			
							SET 2" WELL AT 23' TOP OF WELL AT 13' SAND TO 10'8" BENTONITE TO 9'7"			
							MATERIALS USED: 10' OF 2" PVC 0.010" SLOT SCREEN 15' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 200# OF SAND 40# OF CEMENT MIX 1 2" EXPANSION CAP 1 2" PVC CAP 1 6" CAST IRON MANHOLE			

GROUND SURFACE TO 23' USED HSA CASING THEN

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler

Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 23'
ROCK CORING
SAMPLES 5
HOLE NO. MW-3

M & W Soils Engineering Inc.

Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 11/17/98
HOLE NO. MW-4
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO TED REEVES PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 17'5" AT IMMEDIATELY HOURS
AT ____ AT ____ HOURS

	CASING	SAMPLER	CORE BAR
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 11/17/98
DATE COMPL. 11/17/98
BORING FORMAN M.H. & C.C.
INSPECTOR JOHN
SOILS ENGR.

LOCATION OF BORING AS STAKED, IN ENTRANCE TO RECYCLING PLANT

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE NO.	PEN	REC
						1'10"	BROWN FINE GRAVEL			
						3'8"	BROWN MEDIUM SAND			
5'	5' - 7'	SS	3	4	LOOSE TO MED. DENSE		BROWN FINE SAND - TRACE TO SOME SILT	1	24"	20"
			5	5						
10'	10' - 12'	SS	6	5		13'8"		2	24"	22"
			4	4						
15'	15' - 17'	SS	14	17				3	24"	18"
			14	19						
	17' - 19'	SS	35	37	DENSE TO VERY DENSE WET		BROWN COARSE GRAVEL WITH A FEW COBBLES	4	24"	14"
			42	34		19'8"				
20'							REFUSAL TO AUGER - BEDROCK OR BOULDER			

SET 2" WELL AT 19'5"
TOP OF WELL AT 9'5"
SAND TO 8'2"
BENTONITE TO 7'1"

MATERIALS USED:
10' OF 2" PVC 0.010" SLOT SCREEN
10' OF 2" PVC SOLID
25# OF BENTONITE CHIPS
250# OF SAND
40# OF CEMENT MIX
1 2" EXPANSION CAP (GRIPPER)
1 2" PVC CAP
1 6" CAST IRON MANHOLE

GROUND SURFACE TO 19'8" USED HSA CASING THEN

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 19'8"
ROCK CORING
SAMPLES 4
HOLE NO. MW-4

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 11/17/98
HOLE NO. MW-5
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO TED REEVES PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 18'6" AT IMMEDIATELY HOURS
AT _____ AT _____ HOURS

	CASING	SAMPLER	CORE BAR.
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 11/17/98
DATE COMPL. 11/17/98
BORING FORMAN M.H. & C.C.
INSPECTOR JOHN
SOILS ENGR.

LOCATION OF BORING AS STAKED, ACROSS FROM HIGHWAY GARAGE

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE NO.	PEN	REC
					MED. DENSE	2'	BROWN FINE GRAVEL			
					MED. DENSE	4'	BROWN FINE TO MEDIUM SAND			
5'	5' - 7'	SS	2	3	LOOSE		BROWN FINE SAND WITH SOME SILT	1	24"	16"
			3	3						
	7' - 9'	SS	3	4				2	24"	17"
			4	5						
	9' - 11'	SS	3	2				3	24"	18"
			2	3						
10'	11' - 13'	SS	4	5		11'		4	24"	19"
			4	5	MED. DENSE		BROWN MEDIUM TO COARSE SAND			
	13' - 15'	SS	12	13		13'		5	24"	16"
			15	18						
15'	15' - 17'	SS	18	21				6	24"	18"
			31	42						
	17' - 17'11"	SS	43	77/5"				7	11"	11"
					DENSE - WET		BROWN FINE TO COARSE GRAVEL (OXIDIZED WATER)			
	19' - 20'5"	SS	10	12				8	17"	14"
20'			55/5"							
						21'9"				
							REFUSAL TO AUGER - BEDROCK OR BOULDER			
25'							SET 2" WELL AT 21'5" TOP OF WELL AT 11'5" SAND TO 8'6" BENTONITE TO 7'5"			
							MATERIALS USED: 10' OF 2" PVC 0.010" SLOT SCREEN 15' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 250# OF SAND 40# OF CEMENT MIX 1 2" EXPANSION CAP (GRIPPER) 1 2" PVC CAP 1 6" CAST IRON MANHOLE			

GROUND SURFACE TO 21'9" USED HSA CASING THEN

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 21'9"
ROCK CORING
SAMPLES 8
HOLE NO. MW-5

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

SHEET 1 OF 1
DATE 11/17/98
HOLE NO. MW-6
LINE & STA.
OFFSET

TO DSM ENVIRONMENTAL SERVICES, INC. ADDRESS ASCUTNEY, VT
PROJECT NAME LEMIRE PROPERTY LOCATION WINDSOR, VT
REPORT SENT TO TED REEVES PROJ. NO.
SAMPLES RETAINED BY DSM ENVIRONMENTAL OUR JOB NO. 7556-98

GROUND WATER OBSERVATIONS
AT 19'2" AT IMMEDIATELY HOURS
AT _____ AT _____ HOURS

	CASING	SAMPLER	CORE BAR.
Type	HSA	SS	
Size I. D.	4 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV.
DATE STARTED 11/17/98
DATE COMPL. 11/17/98
BORING FORMAN M.H. & C.C.
INSPECTOR JOHN
SOILS ENGR.

LOCATION OF BORING

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE NO.	PEN	REC
					MED. DENSE	2'8"	BROWN FINE GRAVEL			
					MED. DENSE	4'	BROWN MEDIUM SAND			
5'	5' - 7'	SS	5	4				1	24"	19"
			4	4						
					MED. DENSE		BROWN FINE SAND - TRACE TO SOME SILT			
10'	10' - 12'	SS	6	4				2	24"	22"
			4	4						
						12'9"				
15'	15' - 17'	SS	12	17				3	24"	20"
			24	41						
	17' - 19'	SS	13	17	DENSE - WET		BROWN COARSE GRAVEL WITH SOME COBBLES	4	24"	17"
			13	18						
	19' - 21'	SS	16	8				5	24"	20"
20'			6	4		20'				
					MED. DENSE WET	22'8"	GREY SILT - TRACE OF FINE SAND			
							REFUSAL TO AUGERS - BEDROCK OR BOULDER			
25'							SET 2" WELL AT 22' TOP OF WELL AT 12' SAND TO 9' BENTONITE TO 7'10"			
							MATERIALS USED: 10' OF 2" PVC 0.010" SLOT SCREEN 15' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 250# OF SAND 40# OF CEMENT MIX 1 2" EXPANSION CAP (GRIPPER) 1 2" PVC CAP 1 6" CAST IRON MANHOLE			

GROUND SURFACE TO 22'8" USED HSA CASING THEN

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Tes
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohensive Consistancy
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 22'8"
ROCK CORING
SAMPLES 5
HOLE NO. MW-6

Lemire / 18 Central Street
Windsor, Vermont
Attachment 3
Analysis Summary and Results

Lemire/18 Central Street
Groundwater Sample Analysis Results
Summary Table

All results are presented in micrograms per liter (ug/l)

	VT Preventive Action Level	VT Enforcement Standard	MW1	MW2	MW3	MW4	MW5	MW6
TPH	*	*	<0.6	NS	1.1	<1	<0.5	<0.6
mp-xylene	5000	10000	<1	NS	2	<1	<1	<1
iso-Propylbenzene	*	*	<1	NS	1	<1	<1	<1
1,3,5 Trimethylbenzene	2	4	<1	NS	7	<1	<1	<1
1,2,4 Trimethylbenzene	2.5	5	<1	NS	28	<1	<1	<1
sec-Butylbenzene	*	*	<1	NS	2	<1	<1	<1
Napthalene	10	20	<1	NS	[redacted]	<1	<1	<1

NS — No sample collected from this monitoring well due to the presence of free product.

* No standard is defined in the Vermont Groundwater Protection Rules and Strategy.

Value exceeds Vermont Enforcement Standard as defined in the Vermont Groundwater Protection Rules and Strategy.

Value exceeds Vermont Preventive Action Level as defined in the Vermont Groundwater Protection Rules and Strategy.

eastern analytical

professional laboratory services

Ted Reeves
DSM Environmental Services, Inc.
Thrasher Road, Rt.5
Ascutney, Vt 05030

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 15153 DSM
Client Identification: Lemire's 380
Date Received: 12/11/98

Dear Mr. Reeves:

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy. Unless otherwise stated, all holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

< = "less than" followed by the detection limit
TNR = Testing Not Requested
ND = None Detected, no established detection limit
BRL = Below Reporting Limits

If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Will Brunkhorst

Will Brunkhorst, President

12/23/98
Date

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 15153

Client: **DSM Environmental Services, Inc.** Client Designation: **Lemire's 380**

Sample ID:	MW1	MW3	MW5	MW6	121098
Analytical Type:	Sample	Sample	Sample	Sample	Sample
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	12/10/98	12/10/98	12/10/98	12/10/98	12/10/98
Date Received:	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98
Units:	mg/l	mg/l	mg/l	mg/l	mg/l
Date of Extraction/Prep:	12/12/98	12/12/98	12/12/98	12/12/98	12/14/98
Date of Analysis:	12/15/98	12/15/98	12/15/98	12/15/98	12/15/98
Analyst:	DJS	DJS	DJS	DJS	DJS
Method:	8100 Mod	8100 Mod	8100 Mod	8100 Mod	8100 Mod
Dilution Factor:	1	1	1	1	1
TPH (C9-C40)	< 0.6	1.1	< 1	< 0.5	< 0.6

Approved By: Timothy Schaper Organics Supervisor Timothy C. Schaper 12/16/98

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 15153

Client: DSM Environmental Services, Inc. Client Designation: Lemire's 380

Volatile Organic Compounds

Sample ID:	MW5	MW6	121098		MW5	MW6	121098
Matrix:	Aqueous	Aqueous	Aqueous		Aqueous	Aqueous	Aqueous
Date Received:	12/11/98	12/11/98	12/11/98		12/11/98	12/11/98	12/11/98
Units:	µg/L	µg/L	µg/L		µg/L	µg/L	µg/L
Date of Analysis:	12/16/98	12/16/98	12/16/98		12/16/98	12/16/98	12/16/98
Analyst:	JDS	JDS	JDS		JDS	JDS	JDS
EPA Method:	8260B	8260B	8260B		8260B	8260B	8260B
Dichlorodifluoromethane	< 5	< 5	< 5	1,3-Dichloropropane	< 2	< 2	< 2
Chloromethane	< 2	< 2	< 2	Tetrachloroethene	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2	Dibromochloromethane	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2	1,2-Dibromoethane	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5	Chlorobenzene	< 2	< 2	< 2
Trichlorofluoromethane	< 5	< 5	< 5	1,1,1,2-Tetrachloroethane	< 2	< 2	< 2
Diethyl ether	< 5	< 5	< 5	Ethylbenzene	< 1	< 1	< 1
Acetone	< 10	< 10	< 10	mp-Xylene	< 1	< 1	< 1
1,1-Dichloroethene	< 1	< 1	< 1	o-Xylene	< 1	< 1	< 1
Methylene chloride	< 5	< 5	< 5	Styrene	< 1	< 1	< 1
Carbon disulfide	< 5	< 5	< 5	Bromoform	< 2	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 10	< 10	< 10	iso-Propylbenzene	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 2	< 2	< 2	1,1,2,2-Tetrachloroethane	< 2	< 2	< 2
1,1-Dichloroethane	< 2	< 2	< 2	1,2,3-Trichloropropane	< 2	< 2	< 2
2-Butanone(MEK)	< 10	< 10	< 10	n-Propylbenzene	< 1	< 1	< 1
2,2-Dichloropropane	< 2	< 2	< 2	Bromobenzene	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 2	< 2	< 2	1,3,5-Trimethylbenzene	< 1	< 1	< 1
Chloroform	< 2	< 2	< 2	2-Chlorotoluene	< 2	< 2	< 2
Bromochloromethane	< 2	< 2	< 2	4-Chlorotoluene	< 2	< 2	< 2
Tetrahydrofuran(THF)	< 10	< 10	< 10	tert-Butylbenzene	< 1	< 1	< 1
1,1,1-Trichloroethane	< 2	< 2	< 2	1,2,4-Trimethylbenzene	< 1	< 1	< 1
1,1-Dichloropropene	< 2	< 2	< 2	sec-Butylbenzene	< 1	< 1	< 1
Carbon tetrachloride	< 2	< 2	< 2	p-isoPropyltoluene	< 1	< 1	< 1
1,2-Dichloroethane	< 2	< 2	< 2	1,3-Dichlorobenzene	< 1	< 1	< 1
Benzene	< 1	< 1	< 1	1,4-Dichlorobenzene	< 1	< 1	< 1
Trichloroethene	< 2	< 2	< 2	n-Butylbenzene	< 1	< 1	< 1
1,2-Dichloropropane	< 2	< 2	< 2	1,2-Dichlorobenzene	< 1	< 1	< 1
Bromodichloromethane	< 2	< 2	< 2	1,2-Dibromo-3-chloropropane	< 2	< 2	< 2
Dibromomethane	< 2	< 2	< 2	1,2,4-Trichlorobenzene	< 1	< 1	< 1
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	Hexachlorobutadiene	< 1	< 1	< 1
cis-1,3-Dichloropropene	< 2	< 2	< 2	Naphthalene	< 1	< 1	< 1
Toluene	< 1	< 1	< 1	1,2,3-Trichlorobenzene	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 2	< 2	< 2				
1,1,2-Trichloroethane	< 2	< 2	< 2				
2-Hexanone	< 10	< 10	< 10				

Approved By: Clifford Chase, Volatile Organics Supervisor 12/16/98

LABORATORY REPORT

Eastern Analytical, Inc. ID#: 15153

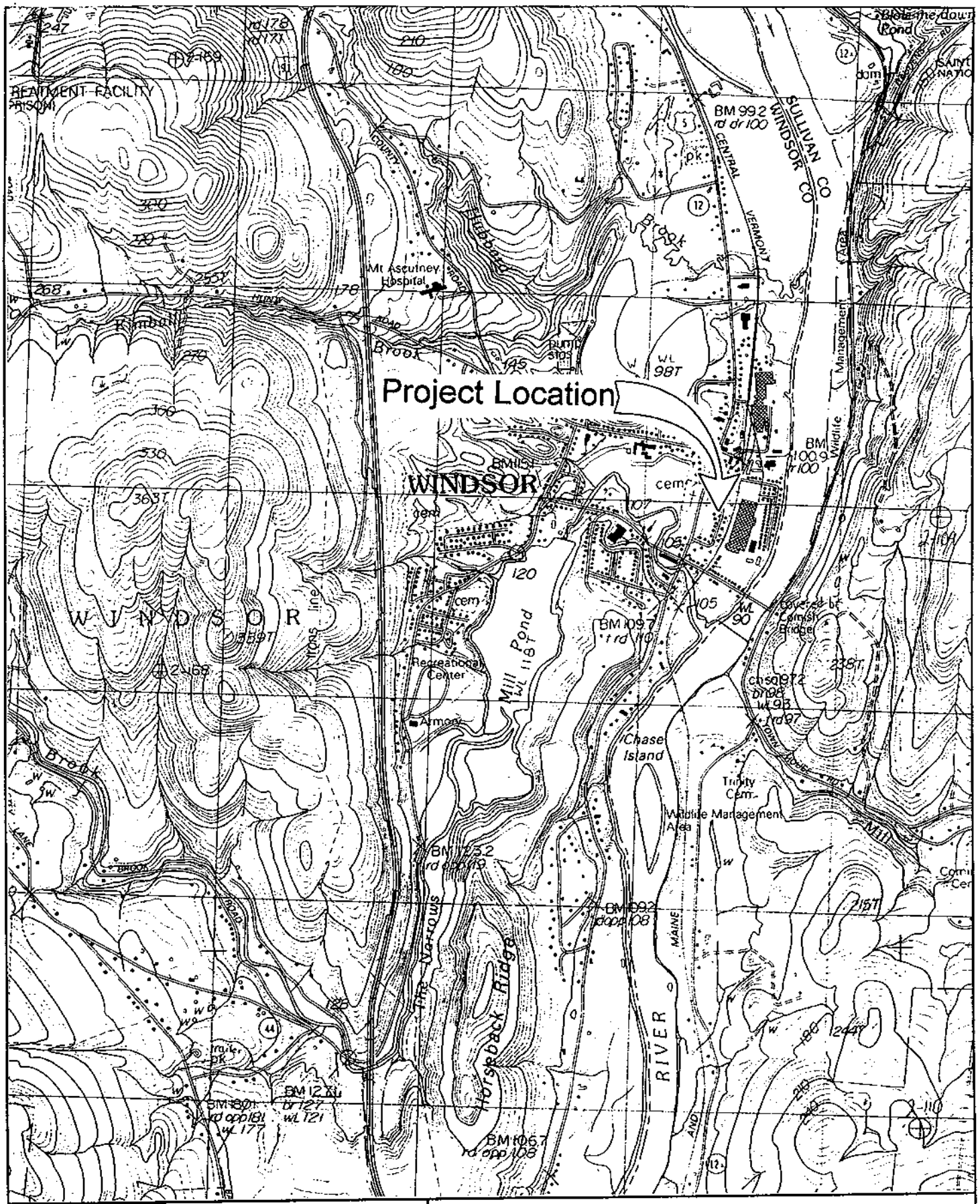
Client: DSM Environmental Services, Inc. Client Designation: Lemire's 380

Volatile Organic Compounds

Sample ID:	MW1	MW3	MW4		MW1	MW3	MW4
Matrix:	Aqueous	Aqueous	Aqueous		Aqueous	Aqueous	Aqueous
Date Received:	12/11/98	12/11/98	12/11/98		12/11/98	12/11/98	12/11/98
Units:	µg/L	µg/L	µg/L		µg/L	µg/L	µg/L
Date of Analysis:	12/16/98	12/16/98	12/16/98		12/16/98	12/16/98	12/16/98
Analyst:	JDS	JDS	JDS		JDS	JDS	JDS
EPA Method:	8260B	8260B	8260B		8260B	8260B	8260B
Dichlorodifluoromethane	< 5	< 5	< 5	1,3-Dichloropropane	< 2	< 2	< 2
Chloromethane	< 2	< 2	< 2	Tetrachloroethene	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2	Dibromochloromethane	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2	1,2-Dibromoethane	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5	Chlorobenzene	< 2	< 2	< 2
Trichlorofluoromethane	< 5	< 5	< 5	1,1,1,2-Tetrachloroethane	< 2	< 2	< 2
Diethyl ether	< 5	< 5	< 5	Ethylbenzene	< 1	< 1	< 1
Acetone	< 10	< 10	< 10	mp-Xylene	< 1	2	< 1
1,1-Dichloroethene	< 1	< 1	< 1	o-Xylene	< 1	< 1	< 1
Methylene chloride	< 5	< 5	< 5	Styrene	< 1	< 1	< 1
Carbon disulfide	< 5	< 5	< 5	Bromoform	< 2	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 10	< 10	< 10	iso-Propylbenzene	< 1	1	< 1
trans-1,2-Dichloroethene	< 2	< 2	< 2	1,1,2,2-Tetrachloroethane	< 2	< 2	< 2
1,1-Dichloroethane	< 2	< 2	< 2	1,2,3-Trichloropropane	< 2	< 2	< 2
2-Butanone(MEK)	< 10	< 10	< 10	n-Propylbenzene	< 1	< 1	< 1
2,2-Dichloropropane	< 2	< 2	< 2	Bromobenzene	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 2	< 2	< 2	1,3,5-Trimethylbenzene	< 1	7	< 1
Chloroform	< 2	< 2	< 2	2-Chlorotoluene	< 2	< 2	< 2
Bromochloromethane	< 2	< 2	< 2	4-Chlorotoluene	< 2	< 2	< 2
Tetrahydrofuran(THF)	< 10	< 10	< 10	tert-Butylbenzene	< 1	< 1	< 1
1,1,1-Trichloroethane	< 2	< 2	< 2	1,2,4-Trimethylbenzene	< 1	28	< 1
1,1-Dichloropropene	< 2	< 2	< 2	sec-Butylbenzene	< 1	2	< 1
Carbon tetrachloride	< 2	< 2	< 2	p-isoPropyltoluene	< 1	< 1	< 1
1,2-Dichloroethane	< 2	< 2	< 2	1,3-Dichlorobenzene	< 1	< 1	< 1
Benzene	< 1	< 1	< 1	1,4-Dichlorobenzene	< 1	< 1	< 1
Trichloroethene	< 2	< 2	< 2	n-Butylbenzene	< 1	< 1	< 1
1,2-Dichloropropane	< 2	< 2	< 2	1,2-Dichlorobenzene	< 1	< 1	< 1
Bromodichloromethane	< 2	< 2	< 2	1,2-Dibromo-3-chloropropane	< 2	< 2	< 2
Dibromomethane	< 2	< 2	< 2	1,2,4-Trichlorobenzene	< 1	< 1	< 1
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	Hexachlorobutadiene	< 1	< 1	< 1
cis-1,3-Dichloropropene	< 2	< 2	< 2	Naphthalene	< 1	12	< 1
Toluene	< 1	< 1	< 1	1,2,3-Trichlorobenzene	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 2	< 2	< 2				
1,1,2-Trichloroethane	< 2	< 2	< 2				
2-Hexanone	< 10	< 10	< 10				

Approved By: Clifford Chase, Volatile Organics Supervisor 12/16/98

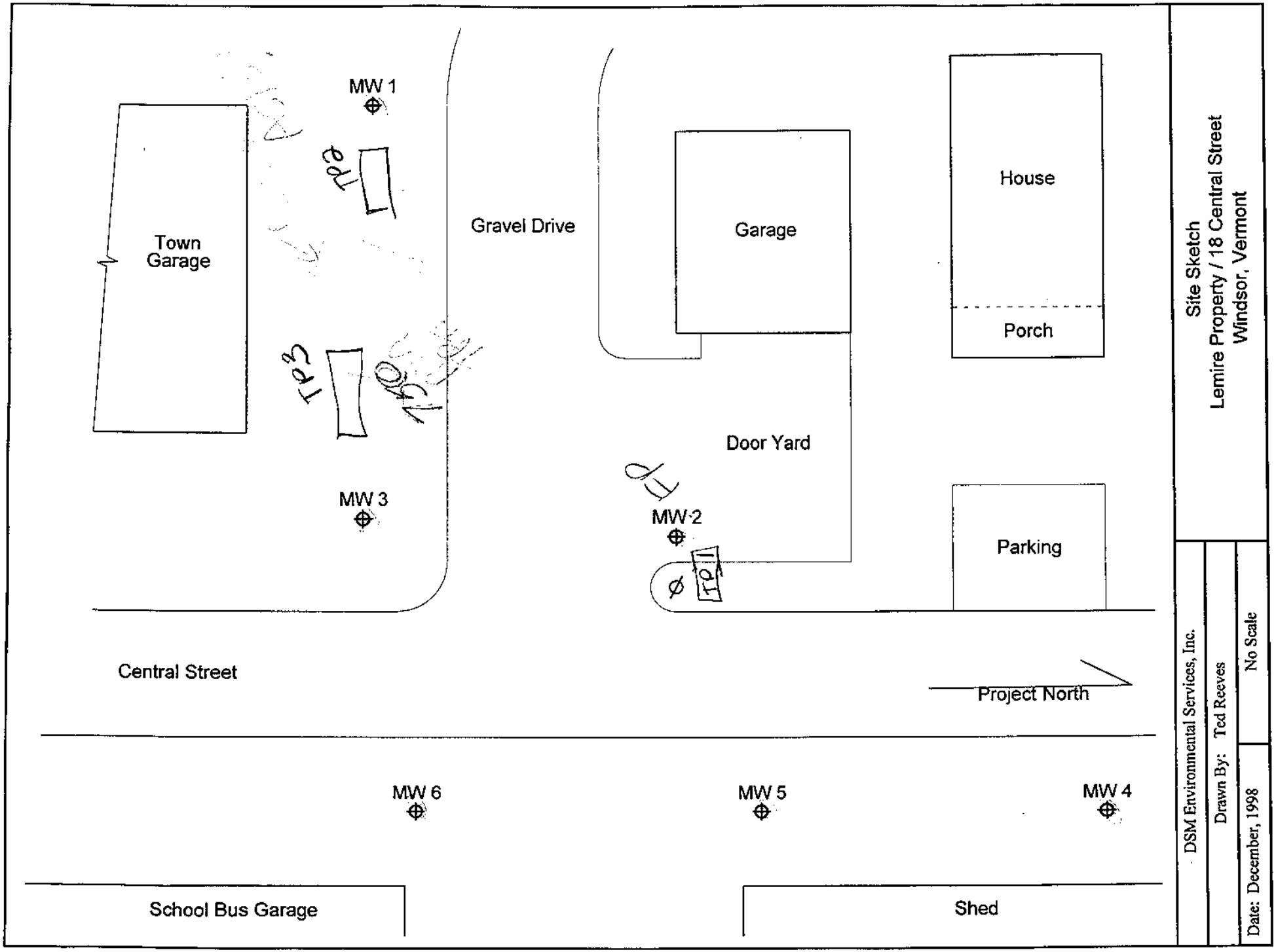
Lemire / 18 Central Street
Windsor, Vermont
Attachment 4
Site Sketch and Locus Plan



DSM Environmental Services, Inc.	
Drawn By: Ted Reeves	
Date: September, 1998	Scale: As Shown

Locus Plan

18 Central Street, Windsor, Vermont



Site Sketch
Lemire Property / 18 Central Street
Windsor, Vermont

DSM Environmental Services, Inc.

Drawn By: Ted Reeves

Date: December, 1998

No Scale